

Cooper Lighting Solutions Photometric Lab
1121 Highway 74 South
Peachtree City, GA 30269



Scaled data based on original data using
LM-79-2024 Approved Method: Electrical and Photometric Measurements of Solid-
State Lighting Products

Test Report Prepared for
Cooper Lighting Solutions

Brand: NEO-RAY

Report Number: P1055682

Luminaire Tested: S123R3DR-S775D950-X4F0-XX-UDD-F-W

Issue Date: 7/25/2025

Test Information

Test Method: LM-79-2024
Report Number: P1055682
TEST IS SCALED FROM IESNA LM-79-08 TEST DATA (G2-2503-402-4)
Test Lab: INNOVATION CENTER
Issue Date: 7/25/2025
Manufacturer: COOPER LIGHTING SOLUTIONS
Product Line: NEO-RAY
Catalog Number: S123R3DR-S775D950-X4F0-XX-UDD-F-W
Description: DEFINE 3, WHITE 3-INCH REGRESSED DIRECT RECESSED HOUSING WITH FROSTED LENS
CORE LIGHT ENGINE
Light Source: 5000K CCT, 90 CRI LEDS
Ballast/Driver: -

Summary

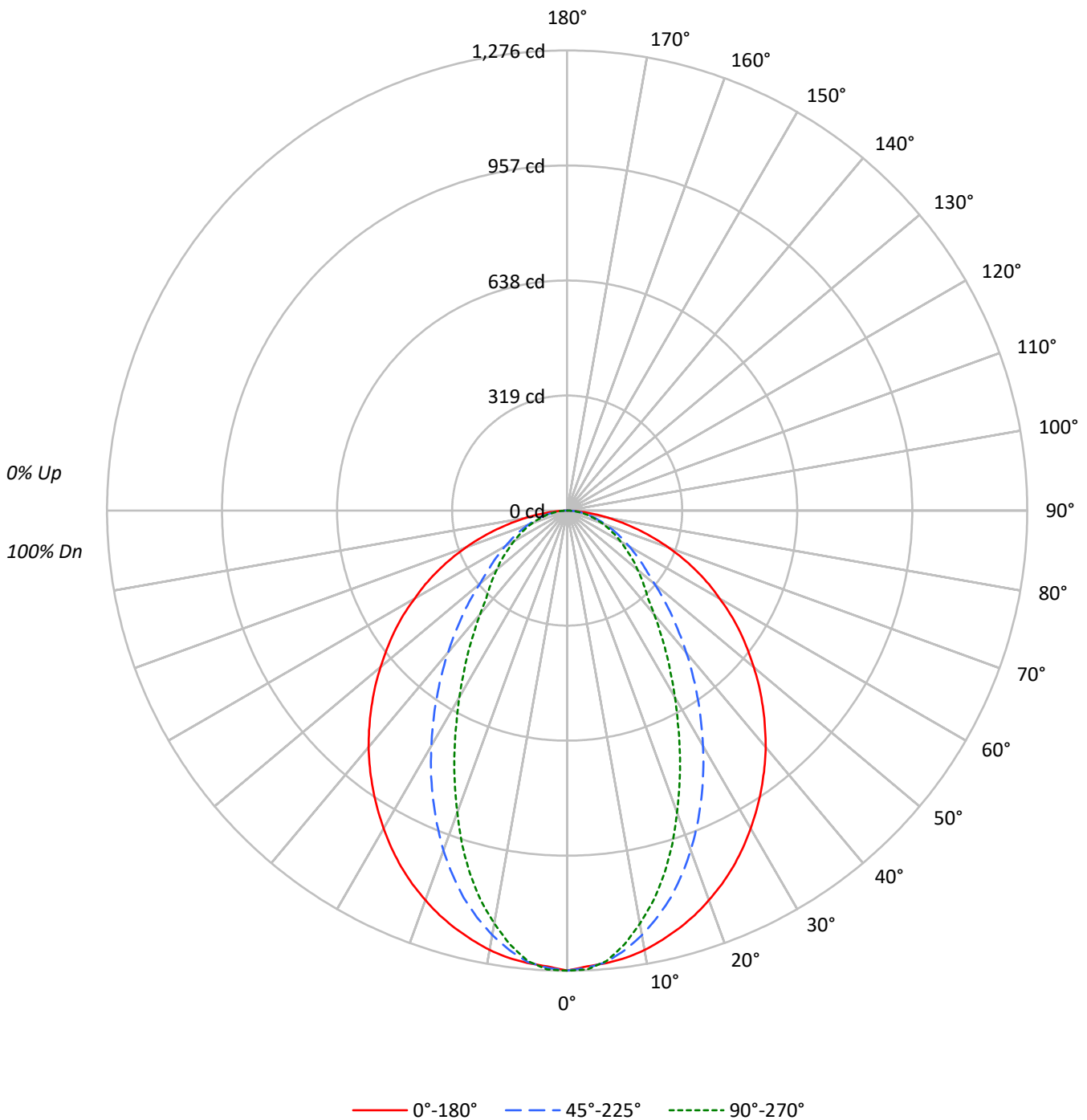
Lumens per Lamp: N/A
Luminaire Lumens: 2237.0 lumens
Efficiency: N/A
Efficacy: 84.7 lumens/watt
Spacing Criteria (0/90/45): 1.19 / 0.83 / 1.02
Luminous Opening: Rectangular (W 0.23' x L: 3.9' x H: 0')
CIE Type: Direct

Input Watts (W): 26.4
Input Voltage (V): 120
Input Current (A_{in}): NR
Voltage Rise (V): NR
Power Factor: NR
Total Harmonic Distortion (THDi): NR
Frequency (hertz): 60
Stabilization Time: NR
Operation Time: NR
Ambient Temperature (°C): NR
Test Distance: 24 FT

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Luminous Intensity Polar Plot





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COEFFICIENT OF UTILIZATION - ZONAL CAVITY METHOD:

RF	20					20					20					20					20					
RC	80					70					50					30					10					0
RW	70	50	30	10	70	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	50	30	10	0		
RCR																										
0	119	119	119	119	116	116	116	116	111	111	111	106	106	106	102	102	102	100					100			
1	110	106	102	99	107	104	100	97	99	97	94	96	93	91	92	90	88	86					86			
2	101	94	88	83	99	92	87	82	89	84	80	85	82	78	83	79	76	74					74			
3	93	84	77	71	91	82	76	70	80	74	69	77	72	68	74	70	67	65					65			
4	86	75	68	61	84	74	67	61	72	65	60	70	64	59	67	63	59	57					57			
5	80	68	60	54	78	67	60	54	65	58	53	63	57	53	62	56	52	50					50			
6	75	62	54	48	73	61	54	48	60	53	48	58	52	47	57	51	47	45					45			
7	70	57	49	43	68	56	49	43	55	48	43	53	47	43	52	47	42	40					40			
8	65	53	45	39	64	52	44	39	51	44	39	49	43	39	48	43	39	37					37			
9	61	49	41	36	60	48	41	36	47	40	36	46	40	35	45	39	35	34					34			
10	58	45	38	33	56	45	38	33	44	37	33	43	37	33	42	37	33	31					31			

AVERAGE LUMINANCE (cd/sqm):

	0°	45°	90°
0°	15378	15378	15378
5°	15241	15206	15172
10°	15148	14635	14237
15°	14968	13861	13003
20°	14750	12865	11432
25°	14493	11713	9835
30°	14171	10479	8314
35°	13831	9267	7021
40°	13483	8093	5900
45°	13078	6979	5205
50°	12668	5940	4777
55°	12292	5295	4412
60°	11777	4784	4118
65°	11294	4382	3866
70°	10526	4036	3631
75°	9419	3731	3424
80°	8082	3444	3180
85°	5672	3168	3029

MAXIMUM LUMINANCE 45°-90°:

Horizontal Angle: 0°
 Vertical Angle: 45°
 Luminance: 13078 cd/sqm



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ZONAL LUMENS:

Zone	Lumens	% Fixture
0°-10°	118.2	5.3
10°-20°	312.8	14.0
20°-30°	412.1	18.4
30°-40°	418.2	18.7
40°-50°	363.5	16.3
50°-60°	284.8	12.7
60°-70°	193.5	8.7
70°-80°	104.9	4.7
80°-90°	28.9	1.3
90°-100°	0.0	0.0
100°-110°	0.0	0.0
110°-120°	0.0	0.0
120°-130°	0.0	0.0
130°-140°	0.0	0.0
140°-150°	0.0	0.0
150°-160°	0.0	0.0
160°-170°	0.0	0.0
170°-180°	0.0	0.0
0°-30°	843.1	37.7
0°-40°	1261.4	56.4
0°-60°	1909.7	85.4
0°-90°	2237.0	100.0
90°-120°	0.0	0.0
90°-150°	0.0	0.0
90°-180°	0.0	0.0
0°-180°	2237.0	100.0

CANDELA DISTRIBUTION:

	0°	22.5°	45°	67.5°	90°	Flux
0°	1276	1276	1276	1276	1276	
5°	1259	1274	1256	1245	1254	120
15°	1199	1182	1110	1056	1042	338
25°	1090	1024	880	771	739	501
35°	940	828	630	509	477	588
45°	767	615	409	316	305	592
55°	585	406	252	215	210	522
65°	396	219	154	137	136	391
75°	202	101	80	74	74	216
85°	41	25	23	21	22	52
90°	0	0	0	0	0	



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CANDELA DISTRIBUTION (FULL):

	0°	22.5°	45°	67.5°	90°
0°	1275.5	1275.5	1275.5	1275.5	1275.5
2.5°	1265.0	1281.2	1268.8	1269.8	1273.6
5°	1259.3	1274.5	1256.4	1245.0	1253.6
7.5°	1250.7	1262.1	1228.8	1210.6	1213.5
10°	1237.3	1241.2	1195.4	1166.7	1162.9
12.5°	1219.2	1212.5	1155.3	1113.3	1106.6
15°	1199.2	1182.0	1110.5	1056.1	1041.8
17.5°	1176.3	1147.7	1058.0	991.2	969.3
20°	1149.6	1109.5	1002.7	917.7	891.0
22.5°	1120.9	1069.4	942.6	842.4	814.7
25°	1089.5	1023.6	880.5	770.8	739.3
27.5°	1055.1	977.8	817.6	700.2	664.9
30°	1017.9	930.1	752.7	631.5	597.2
32.5°	979.8	879.6	690.7	567.6	534.2
35°	939.7	828.1	629.6	509.4	477.0
37.5°	898.7	775.6	570.5	454.1	423.6
40°	856.7	722.2	514.2	402.6	374.9
42.5°	811.9	668.8	459.8	353.9	332.9
45°	767.0	615.3	409.3	315.8	305.3
47.5°	722.2	561.0	361.6	289.1	279.5
50°	675.4	508.5	316.7	264.3	254.7
52.5°	629.6	457.0	279.5	240.4	233.7
55°	584.8	406.4	251.9	214.6	209.9
57.5°	538.1	356.8	224.2	194.6	188.9
60°	488.4	309.1	198.4	173.6	170.8
62.5°	443.6	264.3	175.5	155.5	152.6
65°	395.9	219.4	153.6	137.4	135.5
67.5°	347.3	182.2	133.6	120.2	119.2
70°	298.6	153.6	114.5	104.0	103.0
72.5°	250.9	126.9	96.4	89.7	87.8
75°	202.2	101.1	80.1	74.4	73.5
77.5°	158.4	78.2	63.9	60.1	59.1
80°	116.4	58.2	49.6	46.7	45.8
82.5°	76.3	40.1	35.3	33.4	33.4
85°	41.0	24.8	22.9	21.0	21.9
87.5°	14.3	10.5	10.5	9.5	10.5
90°	0.0	0.0	0.0	0.0	0.0



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CIE UGR TABLE:

Reflectances:											
Ceiling		0.7	0.7	0.5	0.5	0.3	0.7	0.7	0.5	0.5	0.3
Wall		0.5	0.3	0.5	0.3	0.3	0.5	0.3	0.5	0.3	0.3
Reference plane		0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2	0.2
Room dimensions		Viewed crosswise					Viewed endwise				
X=2H	Y=2H	20.05	21.55	20.42	21.86	22.17	15.20	16.69	15.57	17.01	17.32
	3H	21.94	23.28	22.32	23.61	23.97	16.83	18.17	17.21	18.50	18.86
	4H	22.70	23.95	23.10	24.30	24.68	17.47	18.72	17.87	19.07	19.45
	6H	23.26	24.42	23.67	24.79	25.18	17.96	19.12	18.37	19.48	19.88
	8H	23.43	24.54	23.86	24.93	25.33	18.13	19.23	18.55	19.62	20.02
	12H	23.53	24.59	23.96	24.97	25.40	18.25	19.31	18.68	19.69	20.12
4H	2H	20.10	21.36	20.50	21.70	22.08	15.93	17.19	16.33	17.53	17.91
	3H	22.12	23.16	22.53	23.56	23.96	17.75	18.79	18.16	19.19	19.60
	4H	22.93	23.87	23.37	24.29	24.73	18.50	19.44	18.93	19.85	20.29
	6H	23.62	24.43	24.07	24.88	25.34	19.11	19.92	19.56	20.37	20.83
	8H	23.85	24.61	24.31	25.06	25.52	19.32	20.08	19.78	20.53	21.00
	12H	24.00	24.68	24.48	25.16	25.63	19.49	20.17	19.97	20.65	21.12
8H	4H	22.96	23.72	23.42	24.17	24.63	18.88	19.64	19.34	20.09	20.56
	6H	23.69	24.32	24.18	24.81	25.29	19.61	20.24	20.11	20.73	21.21
	8H	23.96	24.52	24.47	25.03	25.52	19.90	20.46	20.41	20.97	21.46
	12H	24.17	24.67	24.68	25.16	25.72	20.14	20.64	20.65	21.13	21.70
12H	4H	22.94	23.63	23.43	24.10	24.58	18.94	19.62	19.42	20.10	20.57
	6H	23.67	24.24	24.19	24.75	25.24	19.69	20.26	20.21	20.77	21.26
	8H	23.98	24.48	24.49	24.97	25.53	20.04	20.54	20.55	21.03	21.60